

**BIG RIVER MINE TAILINGS
DESLOGE, MISSOURI**

CRCR
Site: BIG RIVER MINE
ID #: MO0981126899
Break: 1.8
Other: _____
1/25/88

The Big River Mine Tailings site is a 600 acre mine tailings pile bordered on three sides by the Big River.

The tailings are easily airborne. During the January 25, 1988 reconnaissance by E & E/FIT photographs and observation documented a dust plume that extended at least 1 mile due east of the site, over the town of Desloge (located approximately 1/4 mile from the site). Extensive sampling of the tailings piles by the University of Missouri - Rolla established mean values for lead (Pb) at 2,077 ug/g (ppm), cadmium (Cd) 26 ppm and zinc (Zn) 1,226 ppm. Since the tailings contain these heavy metals, the resulting dust is a health threat to the more than 15,000 people within a 4-mile radius of the site.

A surface water release was documented in a study by the National Fisheries Research Laboratory, in 1982. The highest dissolved content of the Big River was 0.026 mg/l and the highest total Pb content was 0.68 mg/l. The background water sample Pb content was 0.005 mg/l. The MCL for dissolved Pb is 0.05 mg/l. The Pb content in river sediment is highest at the site (2,215 ppm) and the background sample upstream is lowest (49.6 ppm). The bottom feeding fish of the Big River have unacceptable levels of Pb in the edible tissue. The World Health Organization (WHO) recommended a dietary limit for Pb of 0.3 ug/g. Fish sampled since 1980 consistently exceed the WHO limit, with values generally twice the recommended limit.

Sport fishing, boating, and swimming are the recreational activities on the Big River.

There is a potential for a ground water release because of the on-site landfill. If the leachate from the landfill enters the ground water it could release the heavy metals in the tailings to the ground water. Soil permeability is rapid, thus migration of leachate from this unlined landfill is very likely.

The Potential Responsible Parties are the St. Joe Minerals Corporation which produced the tailings waste and the St. Francois County Environmental Corporation which operates the on-site landfill. St. Joe Minerals owns approximately 100 acres and St. Francois County owns the remaining 500 acres, which they then lease to the landfill operator (St. Francois County Environmental Corporation).

HRS SCORES

Ground Water = 83.8
Surface Water = 10.9*
Air Route = 55.4#
Overall Score = 58.4

* = Observed Release
= Potential Observed Release

40107623



SUPERFUND RECORDS

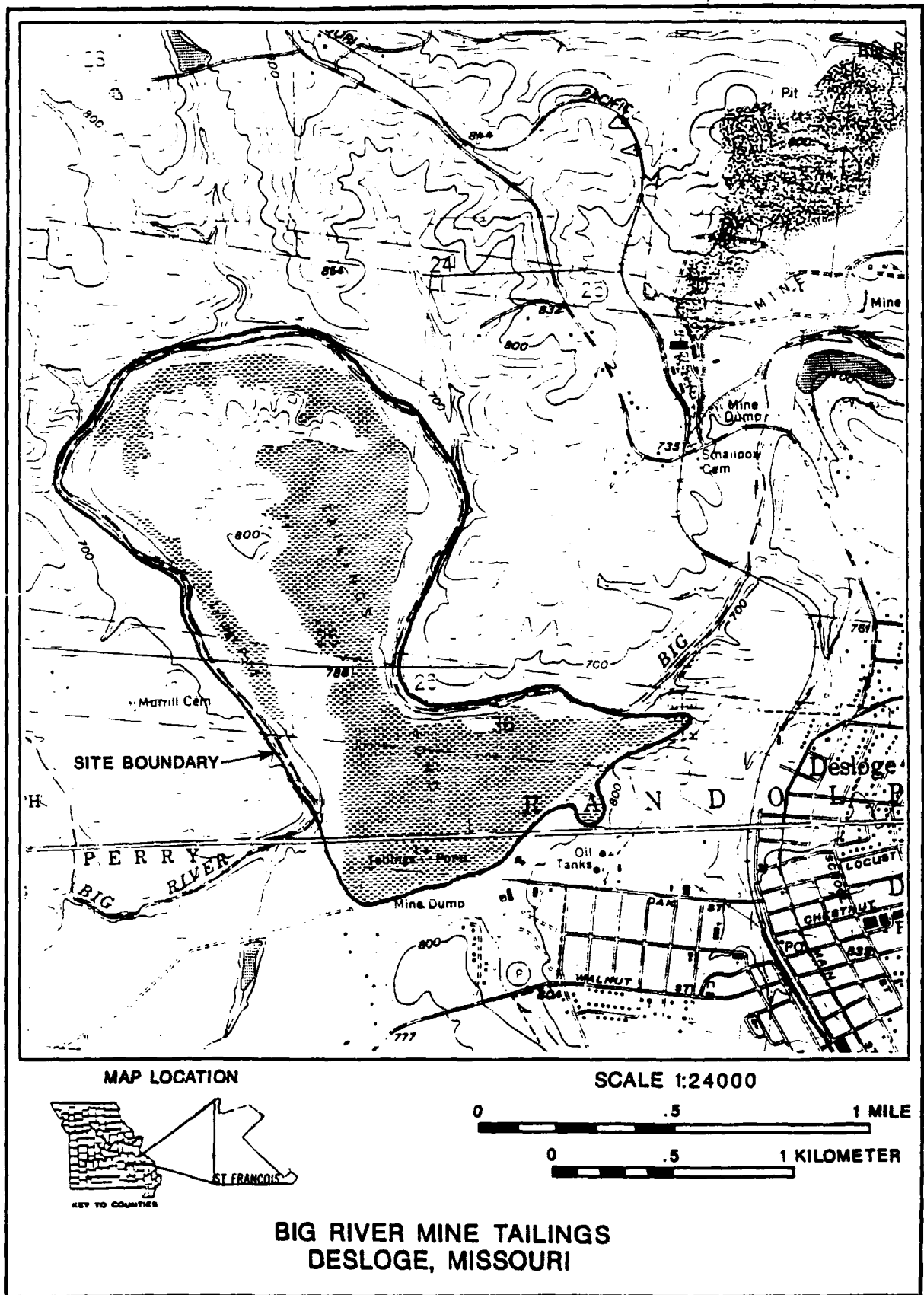
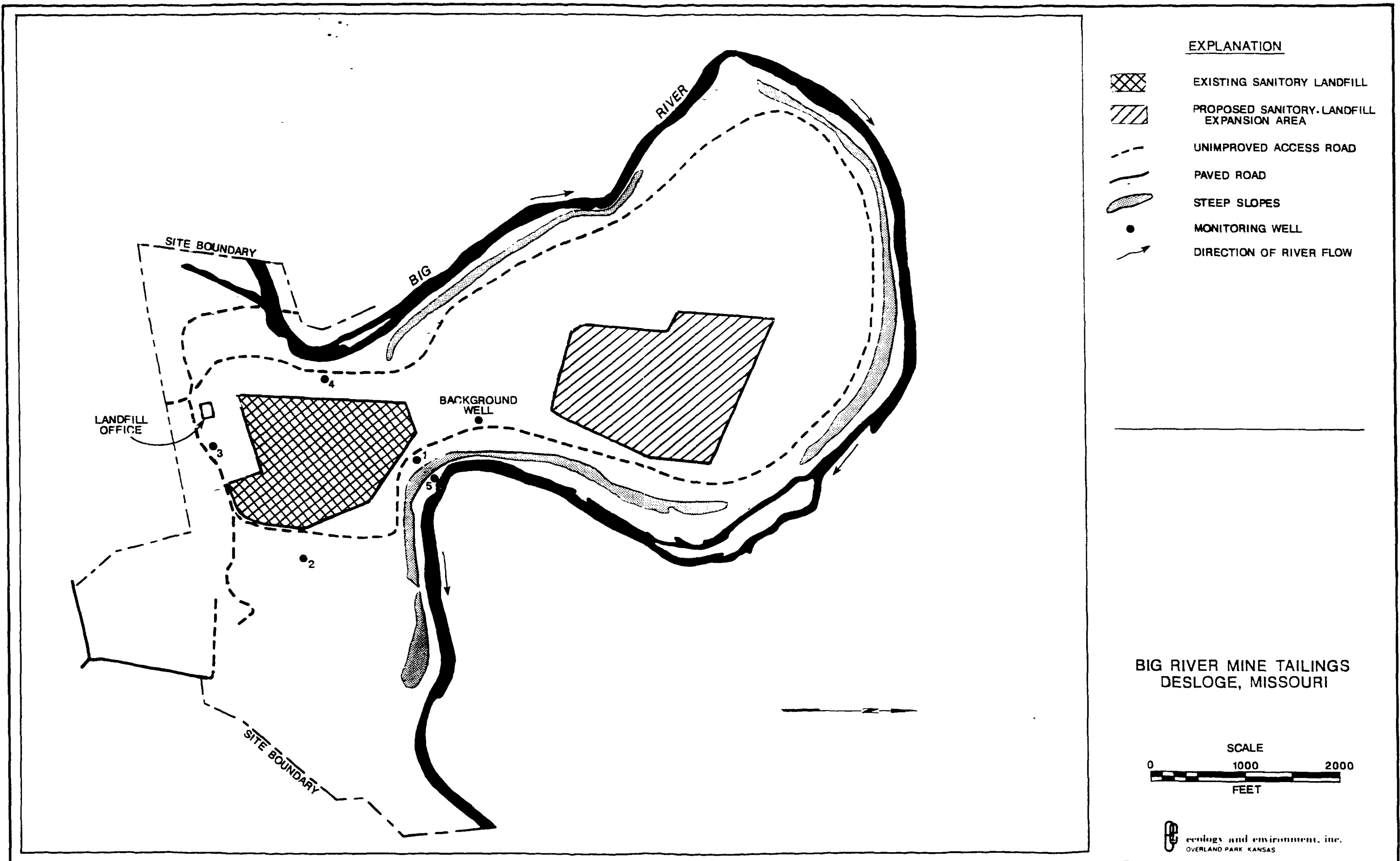


FIGURE 1-1: SITE LOCATION

DRAFT



WASTE SITE TRACKING NO.: MO0618
PREPARED BY: C. WILLIAMS

FIT APRIL 1988
SOURCE: REF. 10

FIGURE 2: SITE MAP